WHAT IS CLAIMED IS:

1. A self-closing prestressed tubular belt with a longitudinal joint, comprising:

a first layer having tension forces that are variable along its width; and

a second layer that is attached to the first layer having compression forces that are variable along its width, so that the belt will curl around an axis defined by a length of the belt with a predetermined shape and a predetermined force at the longitudinal joint.

2. The tubular belt according to claim 1, wherein:

the first layer is an inner elastic layer having an unstressed width that is less than its width in the tubular belt; and

the second layer is an outer elastic layer having an unstressed width that is greater than its with in the tubular belt.

3. The tubular belt according to claim 1, wherein the first layer comprises a central portion having tension forces that are variable along its width, and a peripheral portion having no tension forces.

4. The tubular belt according to claim 1, wherein the first layer has tension forces that are stepwise variable along its width in step regions, the tension forces in any step

region being constant, and the tension forces in adjacent step regions are different from one another.

5. The tubular belt according to claim 1, wherein the first layer comprises one or more attached anchor strips that are configured to be in a force-holding relationship to a tool.

6. A self-closing prestressed tubular belt with a longitudinal joint, comprising:

a first layer that is prestressed; and

a second layer having a depressed central portion that is filled with the first prestressed layer.

7. A self-closing prestressed tubular belt with a longitudinal joint, comprising:

a first layer that is prestressed; and

a second layer having a central region, wherein the first layer is joined to the second layer only in the central region so that the central region of the two joined layers is thicker than a peripheral region.

8. A self-closing prestressed tubular belt with a longitudinal joint, comprising:

a split zone on a lower portion of the belt wherein the belt is divided into one or more flaps along a dividing plane parallel to a surface of the belt.

9. The tubular belt according to claim 8, wherein the flaps are located on a bottom portion of the belt, the tubular belt further comprising an additional belt component used to fill a gap between edges of the flaps, the gap being created by prestressing of the belt in a direction parallel to a plane of the belt.

10. A self-closing prestressed tubular belt with a longitudinal joint, wherein a bending stiffness of the belt in a plane lying through an interlock of the joint and a centroid of a section of the belt is equivalent to a similarly constructed tubular belt having no longitudinal joint.

11. A self-closing prestressed tubular belt with a longitudinal joint, the belt being configured to be operable when bent along its route, the route having a curvature radius of less than three hundred times a diameter of the belt.

12. A method for manufacturing a self-closing tubular belt with predetermined compression forces at a longitudinal joint, comprising:

producing a first stressed layer having tension forces that are variable along its width;

producing a second unstressed layer having no forces along its width; and

joining the first layer to the second layer.

13. The method according to claim 12, further comprising:

stretching a central region of the first layer with a first force;

joining a central region of the second layer to the central region first layer; and

joining the remaining peripheral regions of the layers together.

14. The method according to claim 13, further comprising:

stretching a second region adjacent to the first central region of the first layer with a second force; and

joining a second region of the second layer to the second region of the first layer.

15. The method according to claim 13, further comprising:

providing molds around which both layers are wrapped before joining the remaining peripheral regions of the layers together.

16. The method according to claim 12, wherein joining the first layer to the second layer comprises:

covering portions of the layers to be joined with at least one of glue and primer-activator; and

applying press-forms to the layers.

17. The method according to claim 12, further comprising:

attaching one or more anchor strips to the first layer, each anchor strip being configured to hold a related portion of the layer in a certain position at a certain force level; and

engaging the anchor strips with rib casts of a tool after applying force to the related portion of the layer, thereby maintaining the force on that portion of the layer.

18. The method according to claim 17, further comprising:

removing one or more of the one or more anchor strips prior to using the belt in a production setting.

19. A method for manufacturing a self-closing tubular belt with predetermined compression forces at a longitudinal joint, comprising:

providing a first nonstressed layer having a depressed central region;

stretching the depressed central region of the first layer by applying a force to the ends of this region; and

placing a second nonstressed layer into the depressed central region and fastening the second nonstressed layer to the first layer.

20. A method for manufacturing a self-closing tubular belt with predetermined compression forces at a longitudinal joint, comprising:

providing a first layer having one or more attached anchor strips;

contacting the first layer with a bottom surface of a tool comprising one or more rib protrusions configured to mate with the one or more attached anchor strips;

applying a force along a width of the belt to bring the one or more anchor strips in a position to engage in a tension relationship the respective one or more rib protrusions, thereby holding a portion of the belt in tension; and

fusing a second layer that is nonstressed to the first layer after applying the force to the first layer.

21. A system for manufacturing a prestressed tubular belt with a longitudinal joint, comprising:

a first elastic layer of a tubular belt comprising one or more attached anchor strips; and

a tool comprising one or more rib protrusions configured to mate with the one or more attached anchor strips when the first elastic layer is in contact with the tool.

22. The system according to claim 21, further comprising a guided grip, comprising:

a grip portion configured to attach the guide grip to the first elastic layer; and

a guide portion connected to the grip portion the permits stability in a vertical plane with flexibility in the horizontal plane to minimize stress concentrations at the grip portion due to a non-uniform stretching belt.

23. The system according to claim 21, the tool further comprising:

vertical webs that are joined together with a stiffener, a bottom of a web and a bottom of a next web being connected with a plate, and the bottom surface of the plate having a radius significantly larger than any radii of a designed tubular belt shape, the rib protrusions being attached at a bottom portion of the web.

24. A system for manufacturing a prestressed tubular belt with a longitudinal joint, comprising:

a first elastic layer of a tubular belt;

an array of flat spring elements generally forming a herring-bone structure and configured to provide a variable tension across the width of the belt, the spring elements being connectable to the first elastic layer; and

distribution rods connected to the spring elements at their end points and midpoints.

25. A method for manufacturing a self-closing tubular belt with predetermined compression forces at a longitudinal joint, comprising:

providing a cylindrical small mandrel having a spiral rib, spirals of the spiral rib having spacers;

winding a plastic material onto the small mandrel having a spiral rib, such that the plastic material thickness is not more than the height of the spiral rib;

curing the plastic material;

removing the plastic material from the small mandrel, resulting in the plastic material being in a form of a spiral rubber spring having gaps between its twists;

winding the rubber spring on a larger mandrel such that widest sections of the spring are associated with one end of the mandrel diameter, and narrowest sections of the spring are associated with an opposite end of the mandrel diameter, thereby forming winding gaps;

filling the winding gaps with a raw filler material;

processing the rubber spring and the raw material so that all turns of the rubber spring are joined together monolithically; and

removing the processed rubber spring with filler from the mandrel by making a longitudinal split in the spring, thereby producing the tubular belt having prestressed regions formed by the spring, and resisting portions formed by the filler material.

26. The method according to claim 25, wherein the spacers are applied to the rib at intervals of more than 360°.